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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/973,424	08/11/2003	Nobuaki Iehisa	392.1530	7835

7590 06/02/2005  
Staas & Halsey  
700 Eleventh Street NW  
Washington, DC 20001

EXAMINER

NGUYEN, PHILLIP

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

08/973,424

**Applicant(s)**

IEHISA ET AL.

**Examiner**

Phillip Nguyen

**Art Unit**

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/11/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawing set of this application is missing. Applicant is required to submit a drawing set. For examination purposes, the drawings in PCT is temporarily using in this Office Action.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 4, and 7 recite "a bending mirror" which is incorrect and should be rewritten such as --a spherical mirror-- or "a convex mirror-- since the mirror has a curved surface and a flat surface which are not bending or "bent".

Claims 3, 6 and 9 recite "said second section" which is lack of antecedence basis.

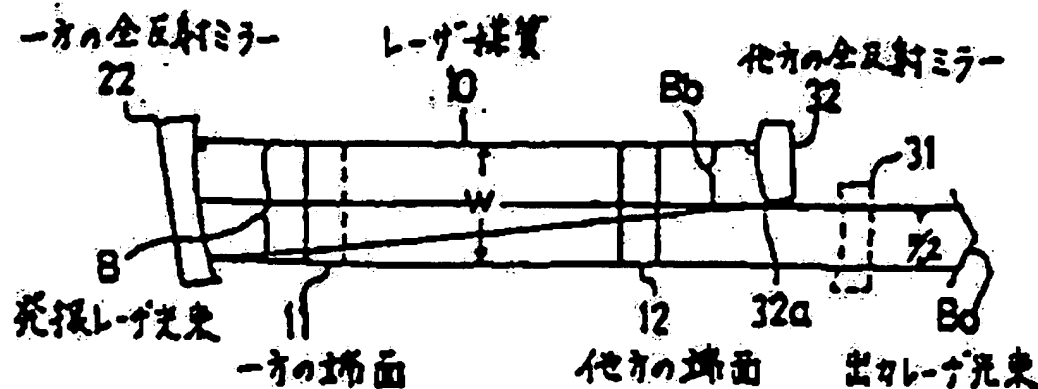
*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

【図 6】



Claims 1-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Iwasaki et al. (JP Publication Number 04-259275).

With respect to claims 1, 4, and 7, Iwasaki discloses in Fig. 6 (above) a solid-state laser device comprising a slab type laser medium 10 for generating a laser beam by laser pumping; and an optical resonator for resonating the laser beam generated by said slab type laser medium, said optical resonator having "a bending mirror" 22 disposed close to one end face of said slab

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type laser medium in a longitudinal direction thereof, and partial and total reflection mirrors 31 and 32 obliquely disposed adjacent to each other and close to the end face of said slab type laser medium, said "bending mirror", said partial reflection mirror and said total reflection mirror being arranged so that an optical path is obliquely formed between said partial and total reflection mirrors via said "bending mirror" with a longitudinal axis of said slab type laser medium situated therebetween, in a first section along an extending direction of a pair of opposite sides 11 and 12 of a rectangular section perpendicular to said longitudinal axis and said optical path formed in said optical resonator occupies at least 50% part of said slab type laser medium, to let laser beam out of said optical resonator through said partial reflection mirror (see abstract).

With respect to claims 2-3, 5-6, and 8-9, Iwasaki discloses in Fig. 8 said laser beam repeatedly undergoes total reflections in said laser medium, and the optical path zigzags in a second section perpendicular to the first section and both end faces of the laser medium are inclined at an angle approximately satisfying Brewster's condition in "said second section".

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. (JP Publication Number 04-259275) in view of Baumert et al. ('631). Iwasaki discloses the claimed invention except for the gain medium being made of Nd:YAG. Baumert discloses an intracavity laser apparatus in Fig. 1 and 4 includes at least a "bending mirror" and a laser gain medium made of Nd:YAG except for the total and partial mirrors formed as disclosed in the claim 1. For the improvement of the laser device, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide the laser medium being made of Nd:YAG because it is well known in the art to use such material for gain medium in the intracavity apparatus.

#### *Citation of Pertinent References*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Baumert et al. discloses Wide Tolerance Modulated Blue Laser Source, U.S. Patent No. 4791631

The Patent Application Publication to IWASAKI et al. discloses Slab Type Solid State Laser Device, Japan Pub No. 04-259275

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***Communication Information***

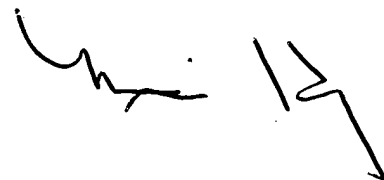
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MINSUN CH HARVEY  
PRIMARY EXAMINER